Pothole-Related FAQs

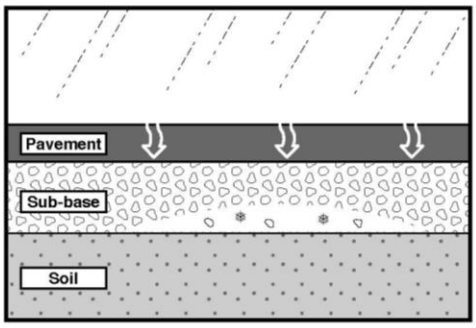
What Makes a Pothole?

Potholes are created when moisture seeps into the pavement, freezes, expands and then thaws.

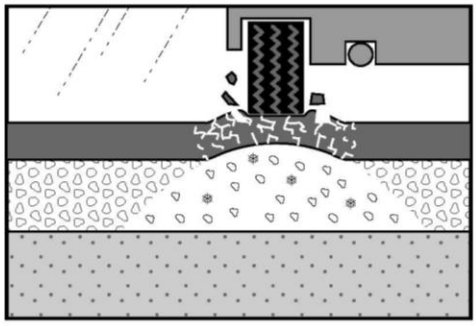
This repeated freezing and thawing weakens the pavement. When this weakened surface is pummeled by traffic, small pieces will break off.

At first, they are small pieces, but on a road with a lot of traffic, a pothole can form in a matter of hours.

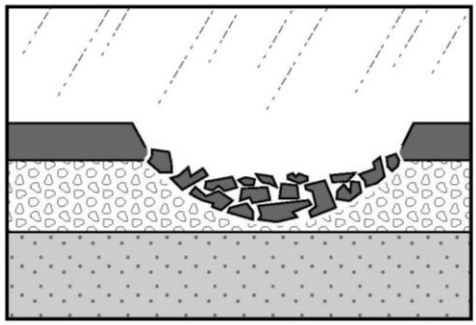
This graphic illustrates how potholes form. *Graphic is courtesy of Virginia DOT*



Water from melting snow and ice seeps into the pavement and softens it. During repeated cold spells, the water in the pavement refreezes and expands, breaking up the pavement, on and below the surface.



When the ice melts, it leaves gaps inside the pavement, and the moisture further softens it. The soft, fractured asphalt cannot support the weight of passing vehicles, and begins to break up.



As vehicles continue to pass over the weakened spot, pieces of roadway are kicked out, creating the hole in the highway.

Why do so many potholes occur in the Spring?

Spring temperatures warm the cold pavement, melting and evaporating any ice. This creates air pockets that can eventually cause the pavement to break up. A winter of heavy snow or rain and several freeze-thaw cycles can mean a big pothole season ahead.

How Are Potholes Repaired?

For immediate repairs, DelDOT staff uses cold-patch material and equipment stocked to make fixes.

Since potholes vary greatly in size and conditions, DelDOT uses many different methods to repair the potholes. Crews use a material called cold patch, which is asphalt that can be used in temperatures colder than typical asphalt.

If the weather is warmer, then crews will use hot mix, or traditional asphalt.

Typically, this process is largely the same for most pothole repairs:

- First, the pothole is carved out with a jackhammer or masonry saw to create a neat rectangle.
- The excess asphalt is removed.
- The stone base material is evaluated and may need replacement or re-compacting.
- The asphalt is added in layers
- The asphalt is finally packed down and leveled using either a roller or a packing machine.

For more permanent repairs we may contract for work, utilizing open-end patching and paving contracts.

Will some road repairs take longer to fix than others? If so, which road repairs take priority?

Yes. Locations that would take priority would be those that present a safety concern and are often areas of high traffic volume or speed, but we still review/address locations that may not meet these criteria.

How much does it cost to fix all of these potholes?

In Fiscal Year 2010, it cost $2.2 million to repair the state's potholes.

Overall, DelDOT's pavement management program considers typical deterioration rates which would account for the harsh winters. By using open-ended contracts, it gives DelDOT the flexibility to have major problems resolved quickly.

For background: DelDOT's budget and the "State budget" are not the same thing. DelDOT's Transportation Trust Fund is separate from the state General Fund. But both are certainly impacted. Similar to snow removal, when there is a need for a repair we fix it. Leaving a problem to get worse, or allowing something to deteriorate to a point that a road surface is unusable, is not how DelDOT operates.

Are there any federal funds that are used for pothole repairs?

Not typically. Federal funds are restricted and can only be used on federally eligible roads. Likewise, they can only be used primarily on capital improvements not operating expenses (such as cold patch).

Who Can I Call to Report a Pothole?

If you encounter a pothole on a state-maintained road, there are many different ways you can report the problem:

- You may go online and report a pothole, by clicking here.
- You can also call 1 (302) 760-2080, or 1-800 652-5600 to report any road maintenance issues.
- You can email DelDOT at dotpr@state.de.us

Crews will rapidly investigate each report and will schedule repairs according to the severity of the pothole and according to the available resources.

If the pothole is on a street that is maintained by a town or city, call the public works or city manager's office in that location. However, some city streets are maintained by DelDOT. If you are unsure, you may call DelDOT at 760-2080.

You Filled a Pothole, But a Few Days Later It Came Back. Why Don't the Repairs Last Longer?

There are several reasons why a newly filled pothole may reopen:

1. When conditions are cold or wet, the material used to patch potholes doesn't stick as well to the surrounding pavement as when conditions are dry and warm.
2. During the winter months, asphalt plants are closed and hot asphalt is not available until the spring. In the meantime, we will typically use a material called "cold mix" which isn't always as durable.
3. If the cause of the pothole is not corrected, such as water getting under the pavement, pothole patches may fail, or more potholes may form. The long-term solution is to repair and repave the road.

Ultimately, our goal is safety and we must repair potholes as soon as possible.

Was this winter particularly hard on Delaware's roads?

The extent of the winter and its impact on our roads will not be fully known until the freeze/thaw cycles complete as that is one of the primary factors in road deterioration. Also as the temperatures warm some roads may "heal."

Cracks in the road are at their widest as the materials contract during cold weather but can close up as the weather warms and the surface expands.

Do Some Roads Have More Potholes Than Others?

Yes. Roads with high traffic volumes have more potholes because of the amount of use. Bridges and ramps, which receive heavy doses of snow-removal chemicals in the winter, are more prone to potholes.

Can Anything Be Done to Prevent Potholes?

Yes. A good practice of maintaining and replacing roads will result in fewer potholes. DelDOT works hard to keep the roads in good condition, which minimizes problems like potholes.

However, they can never be entirely eliminated through good planning alone.

To fight these problems, roads today are built to reduce their moisture capacity, and researchers are working to develop better, more durable pavement materials and designs.

In addition, the cold patch mixtures have made dramatic improvements in their reliability.